

January 5, 2006

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Mojave Desert Air Quality Management District

14306 Park Avenue, Victorville, CA 92392 (760) 245-1661 fax (760) 245-2699

Visit our web site: http://www.mdaqmd.ca.gov

arles L. Fryxell, Air Pollution Control Officer

City of

Gerardo C. Rios Chief, Air Permits Office USEPA Region IX 75 Hawthorne Street San Francisco, CA 94105-3901

Town of Apple

> Re: Blythe Energy Project II and Requested USEPA Approvals

City of Barston District Company No.: 1437 District Facility No.: 2472

Dear Mr. Rios:

provided below:

City of Blythe

The Mojave Desert Air Quality Management District (District) provides the following information in response to your November 21, 2005 letter regarding the proposed Blythe Energy Project II (BEPII), and our related conversations. The District requests explicit USEPA approval for selected elements of the BEPII proposal on a project-specific basis.

City of Hesperia

> Specifically, the District formally requests that the USEPA approve: (1) the use of interpollutant offsets for this project (NO_x for VOC and PM₁₀ for SO_x), (2) the proposed interpollutant offset ratio of 1:1 for this project (NO_x for VOC and PM₁₀ for SO_x), and (3) the use of real, quantifiable, permanent, surplus and enforceable reductions from road paving to offset PM₁₀ emissions from this project.

Determination of Compliance (PDOC) for BEPII. The District did not respond in writing to

USEPA in early 2003 where the identified issues were discussed and the District believed

they were resolved. The District addressed the identified changes to the proposed project within the Final Determination of Compliance (FDOC). A formal response to comments is

On December 26, 2002, your office commented on seven elements of the Preliminary

those comments, as the District attended a meeting between the project proponent and

City of Needles

County of Riverside

County of Bernardina

City of Twentynine

City of Victorville The first comment addressed the combustion turbine power train NO_x limit, as the PDOC limited BEPII to 2.5 ppmvd NO_x averaged over one hour, and your comment letter requested a limit of 2.0 ppmvd. BEPII was required to meet 2.0 ppmvd NO_x averaged over three hours in the FDOC.

PROOF OF SERVICE (REVISED 12.4.05 FILED WITH ORIGINAL MAILED FROM SACRAMENTO ON 1-10-06

Yucca

The second comment addressed the SCR ammonia slip limit, as the PDOC limited BEPII to 10 ppmvd slip and your comment letter recommended 5 ppm. The FDOC retained the 10 ppmvd limit, but the project has subsequently accepted a 5 ppmv ammonia slip limit averaged over 24 hours (reaching 5 ppmv slip will trigger an SCR replace, repair or recondition requirement). This lower slip limit will be placed into the project's local air permits (and the eventual Federal Title V permit).

The third comment addressed the cooling method and required an explicit TDS limit on circulating cooling water. The FDOC includes explicit limits for drift rate, circulation rate and total dissolved solids.

The fourth comment addressed the road paving emission reduction credits, and asked for information to support the credibility, quantification, permanence, surplus and enforceability of the proposed credits. Attached please find the District's discussion of these elements for the proposed road paving actions, including the most current quantification. The District believes the proposed road paving action will meet these criteria once the paving actually occurs.

The fifth comment addressed inter-pollutant offset trading, and required that the proposed trade be shown to be beneficial and affirmatively approved by USEPA. The proposed project is a major modification of the existing Blythe Energy Project, and is located in a federal ozone and PM₁₀ attainment area. The Mojave Desert Air Basin (as a region downwind of the greater Los Angeles airshed, and consequently receiving aged ozone precursors) has been previously demonstrated to be VOC-limited. Accordingly the District has previously used VOC for NO_x ratios in excess of one to one (specifically 1.6:1) for similar new power plant offsetting. The proposed source of NO_x offsets is in the immediate vicinity of the proposed project (directly across the interstate within the same community of Blythe). The District believes a 1:1 ratio of NO_x for VOC will be beneficial (574 tons of ozone precursors are offsetting 453 tons of new ozone precursor emissions). The combined offset history and proposal is presented in Figure 1 below.

Figure 1 - Blythe Energy Projects Offsets

all emissions in tons per year NOX CO VOC SOX PM10 BEP ! 202 306 24 24 103 BEP II 202 685 25 23 61 Total Proposed 404 991 49 47 164 25 25 25 15 Offset Threshold Required Offsets 404 49 47 164 Existing Offset Requirement (BEP I) 202 103 202 47 **New Offset Obligation** 49 61 VOC Offsets provided (BEP I) 323 NOx Offsets proposed (BEP II) 251 108 PM10 Offsets proposed (BEP II)

The sixth comment addressed the malfunction limit exemption and recommended that the term be defined or removed from the permit conditions. The Federal definition will be used for this term.

The seventh comment addressed the carbon monoxide limits for the plant, as the PDOC limited BEPII to 5 ppm (8.4 ppm at lower loads), and your letter required a specific three hour averaging time. The FDOC limits the project to 4 ppmvd averaged over 24 hours in response to our 2003 meeting. The District expects this limit to be acceptable to USEPA.

If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726.

Sincerely,

Afan J. De Salvio

Supervising Air Quality Engineer

cc:

Bill Pfanner, CEC

Thomas Cameron, BEPII

AJD

USEPA review.doc

Discussion of Colorado River Indian Tribe Existing Unpaved Road Paving

REAL. The emission reductions will be real as the level of unpaved road traffic was established prior to the paving and the surface will be paved.

ENFORCEABLE. The road surfaces will be paved by (or on behalf of) the sovereignty (CRIT) with jurisdiction over them; that sovereignty has committed to maintaining the roads in their paved state.¹

PERMANENT. The roads will be paved. The sovereignty with jurisdiction over the roads have committed to including them in their pavement management system.² "Replacement Units" is not an applicable concept in this case since the modification will not change the use (and in any event, will not divert the use to a replacement roadway).

QUANTIFIABLE. The emission reductions are quantified using the methodology required by Rule 1404(A)(2)(c). Historic actual emissions have been calculated by establishing the traffic amount (in vehicle miles traveled or VMT), traffic mean vehicle weight, and road surface material silt content, and surface material moisture content for the road while unpaved. These data were used to calculate entrained unpaved road dust according to the methodology presented in USEPA AP-42 §13.2.2 (December 2003 version). Similar data were used to calculate the substantially smaller amount of entrained paved road dust that will be generated by the same traffic on the road when paved according to the methodology presented in USEPA AP-42 §13.2.1 (December 2003 version). The unpaved entrained PM₁₀, less the paved entrained PM₁₀, represents the emission reduction generated by paving.

Traffic Level (used for unpaved and paved)

Direct vehicle counting through the use of automated vehicle counters was employed for six months during early 2002. This activity was used with on- off-season assumptions to calculate annual activity. Given the activity level and the distance paved, the VMT on the road was calculated. This method gives an average value for the daily traffic on the road, which was used to calculate estimated total annual activity. See below.

Mean Vehicle Weight (used for unpaved and paved)

The District provided an average weight of 3 tons as a default for vehicles other than recreational vehicles, which are assumed to average 10 tons.

Road Surface Material Silt Content (used for unpaved)

This value was determined experimentally for the road while unpaved. Surface soil samples were gathered on January 21, 2002 and analyzed using AP-42 Appendix C (ASTM D 422) to determine silt content.

Surface Material Moisture Content (used for unpaved)

The AP-42 methodology conservative default value of 0.2% was used for this variable.

¹ "Application for PM₁₀ Emission Reduction Credits," August 30, 2002, Colorado River Indian Tribes

² Ibid.

Road Surface Silt Loading (used for paved)

The AP-42 methodology default (conservative) value for low average daily traffic roads of 0.4 was used for this variable. Each road is estimated to have considerably less than the high average threshold of 5000 trips per day.

SURPLUS. There is no SIP or other paving requirement that applies to this region (the region is federal attainment for PM_{10} , and there is no state PM_{10} planning requirement). In any case, no road-paving obligation applied to these roads.

| | Doily | Days | i | Vahiala | | A | Annual |
|---------------------|-------|------|---------|---------|--------------|-------------|--------|
| | Daily | per | Trip | Vehicle | | Annual | Ton- |
| Vehicle Type | Trips | Year | length: | Weight | Daily VMT | VMT | Miles |
| Lost Lake Road: | | | | | | | |
| Off Season Vehicles | 234 | 182 | 0.57 | 3 | 133 | 24275 | 72825 |
| On Season Vehicles | 135 | 183 | 0.57 | 3. | 77 | 14082 | 42246 |
| On Season RVs | 141 | 183 | 0.57 | 10 | 80 | 14708 | 147077 |
| | | | | | Totals: | 53065 | 262148 |
| | | | | Averag | ge Fleet Wei | ght (tons): | 4.94 |
| Hidden Valley Road: | | | | | | | |
| Off Season Vehicles | 136 | 182 | 1.0 | 3 | 136.0 | 24752 | 74256 |
| On Season Vehicles | 89 | 183 | 1.0 | 3 | 89.0 | 16287 | 48861 |
| On Season RVs | 62.0 | 183 | 1.0 | 10 | 62.0 | 11346 | 113460 |
| | | | | | Totals: | 52385 | 236577 |
| | | | | Averag | ge Fleet Wei | ght (tons): | 4.52 |
| Roadrunner Avenue: | | | | | | - · · · • | |
| Off Season Vehicles | 62 | 182 | 0.18 | 3 | 11.2 | 2031 | 6093 |
| On Season Vehicles | 57 | 183 | 0.18 | 3 | 10.3 | 1878 | 5633 |
| On Season RVs | 10.0 | 183 | 0.18 | 10 | 1.8 | 329 | 3294 |
| | | | _ | _ | Totals: | 4238 | 15020 |
| | | | | Averag | e Fleet Wei | ght (tons): | 3.54 |

Net PM10 ERC Issuance Calculation (subtracting paved road emissions) Values

| 7 | | | | | |
|--------------------------|--------|-------|-------|-----------|----------------------|
| Variable or Result | LL | HV | RR | Units | Source/Notes |
| Roads Unpaved: | | | ! | | |
| Silt Content (s) | 12 | 6 | 5 | % | Samples |
| Mean Vehicle Weight (W) | 4.94 | 4.52 | 3.54 | tons | Calculated |
| Mean Vehicle Speed (mph) | 35 | 35 | 35 | mph | Default |
| Moisture Content (M) | 0.2 | 0.2 | 0.2 | % | Default |
| Annual VMT | 53065 | 52385 | 4238 | miles | Calculated |
| Annual Unpaved Emissions | 123920 | 61166 | 4124 | lbs | AP-42 Section 13.2.2 |
| Total Unnaved Emissions | 100000 | | | Ib - DN44 | |

Total Unpaved Emissions: 189209 | Ibs PM10

Roads Paved:

| Silt Loading (sL) | 0.4 | 0.4 | 0.4 | factor | Default |
|-------------------------|-------|-------|------|---------|----------------------|
| Mean Vehicle Weight (W) | 4.94 | 4.52 | 3.54 | tons | Calculated |
| Annual VMT | 53065 | 52385 | 4238 | miles | Calculated |
| Annual Paved Emissions | 630 | 544 | 31 | lbs | AP-42 Section 13.2.1 |
| Total Paved Emissions: | 1205 | | | lbs PM1 | 0 |

| Net ERC PM10 Emissions | 188005 lbs |
|------------------------|-------------------|
| | 94.00 tons |

Notes:

Unpaved Road travel emissions calculated using AP-42 Section 13.2.2 equation 1b (December 2003 version)

Paved Road travel emissions calculated using AP-42 Section 13.2.1 equation 1 (December 2003 version)

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

IN THE MATTER OF:

APPLICATION FOR CERTIFICATION FOR THE BLYTHE II ENERGY PROJECT

DOCKET NO. 02-AFC-1 PROOF OF SERVICE LIST [REVISED 12/6/05]

DOCKET UNIT

Instructions: Send an original signed document plus 12 copies and/or and electronic copy plus one printed copy to the address below:

CALIFORNIA ENERGY COMMISSION DOCKET UNIT, MS-4 Attn: Docket No. 02-AFC-1 1516 Ninth Street Sacramento, CA 95814-5512 docket@energy.state.ca.us

Also send a printed **or** electronic copy of all documents to each of the following:

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DECLARATION OF SERVICE

I <u>Evelyn M Johnson</u>, declare that on <u>January 10, 2006</u>, I deposited copies of the attached <u>Letter from Mojave AQMD re: comments on the EPA</u>,in the United States mail at <u>Sacramento</u>, <u>CA</u> with first class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above. Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210.

Evelyn M Johnson [signature]

I declare under penalty of perjury that the foregoing is true and correct.

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